

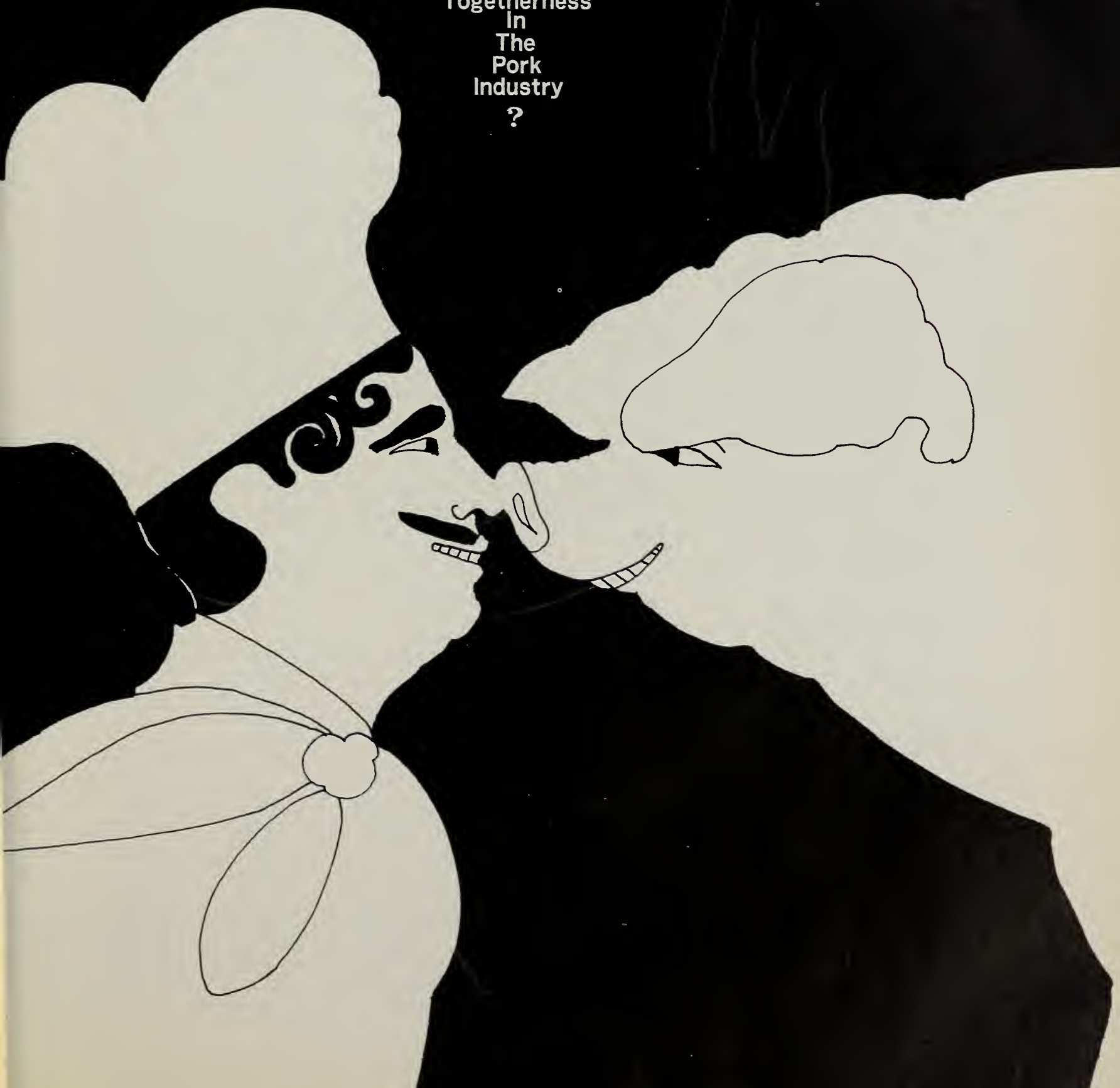
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THE FARM INDEX

U.S. Department of Agriculture / August 1971

Together
In
The
Pork
Industry
?



It looks like another banner year for farm cash receipts from dairy sales. They are projected at a record \$6.8 billion, about \$300 million more than in 1970. Cash receipts have gone up every year since 1965.

Part of the bulge will come from bigger marketings. ERS figures this year's milk production will be up a percent or so from 1970's 117.4 billion pounds. The downtrend in cow numbers will continue, but herd reduction will be more than offset by higher output per cow. This has been running about 2 percent ahead of last year's rate, when 12-month output averaged a record 9,400 pounds per cow.

Cash receipts will also be boosted by higher prices. Prices for manufacturing milk (adjusted to the U.S. annual average fat test) will probably average around the \$4.93/cwt. support level for all of 1971. However, they trailed the support during the first few months of the current marketing year that began in April. Milk eligible for the fluid market brought \$5.84/cwt. in June, up 3 percent from June 1970. This rate of increase is expected to hold in the second half of calendar '71.

Wholesale prices may have less seasonal strength this fall than a year earlier. Butter prices likely will be up, but this year's rise will probably be smaller than usual and shorter. Nonfat dry milk is likely to sell near the support price of 31.7 cents, reflecting increased production. Cheese prices will climb in the fall, though the gain may not reach last year's 3¼ cents.

At the retail level, higher dairy prices are seen in the second half than a year earlier. The advance will be smaller than in late '70. The lowered support price for butter will tend to hold down the price increases for that product as well as for ice cream.

The hog outlook from fall onwards calls for reduced slaughter supplies and higher farm prices than in late 1970 and the first half of '71.

Hog slaughter this summer will stay well above a year earlier but is expected to drop under a year earlier by year's end. On June 1, farmers had 10 percent more hogs and pigs in weight groups that will be marketed

this summer. However, those in weight groups for next fall's marketings were down 2 percent from June 1970.

Slaughter supplies will lag behind year-earlier levels beginning in the fall and continuing well into 1972. Reason is that the June-November 1971 pig crop may be down 8 percent from the 1970 period. These pigs will provide the bulk of slaughter supplies for the first half of next year.

On the price side, quotations will trend seasonally lower into the fall. But the decline will be substantially less than in August-November 1970, when prices at seven major markets tumbled \$6.50/cwt. For the 4th quarter of '71, the outlook is for prices higher than the \$16.42 of October-December 1970. In the first half of '72, they will continue above the average for January-June of this year.

Fed cattle marketings this fall and winter are expected to outpace those of the '70 season. Even so, prices are seen averaging above a year ago because of reduced supplies of competing meat and strong consumer demand for beef.

Feeder cattle prices are projected to drift seasonally lower, probably running near year-earlier levels during most of the fall and winter.

Lamb slaughter will probably be smaller than a year ago, and prices—higher and more stable than in late 1970.

Stocks of soybeans on August 31 are

now estimated at around 100 million bushels—a 3-year low. It's the second year in a row that usage topped production.

Significantly, nearly all the 'bean stocks will be in commercial hands. Unlike last summer, when the Commodity Credit Corporation sold 70 million bushels for September delivery, such reserves are not available for this September, the beginning of the new season. All of next year's demands will therefore have to be met from the '71 soybean crop.

Total supply in 1970/71 is down roughly 6 percent to 1.4 billion bushels, marking the first decline in supply since 1963. Brisk demand is carrying utilization to an all time high of 1.3 billion bushels, about 3 percent above the 1969/70 usage which was of itself a new record.

Through May, soybean crushings totaled nearly 5 percent above a year earlier. The monthly average was running a record 64 million bushels, 3 million higher than last year. For the September-August season, crushings will exceed last year's record by 20-25 million bushels.

Soybean exports are expected to come close to the 1969/70 level. However, as this was written the export picture was somewhat uncertain because of the threat of a dock strike. In the past, in anticipation of strikes, foreign buyers have tended to stock up on soybeans. This aside, foreign buyers would seem to have little price incentive to delay purchases until the new crop is made, inasmuch as price

SOYBEAN SUPPLY AND USE

	1967/68	1968/69	1969/70	1970/71*
<i>Million bushels</i>				
Beginning stocks, Sept. 1	90	166	324	230
Production	976	1,103	1,126	1,136
Total supply	1,066	1,269	1,451	1,366
Crushings	576	606	737	760
Exports	267	287	429	425
Seed, feed, etc.	57	52	55	71
Total use	900	945	1,221	1,256
Ending stocks, Aug. 31	166	324	230	110

* Use and ending stocks are estimates.

spreads between old and new crop soybeans are relatively small.

Farm prices, meanwhile, have been running about a fifth higher than in the previous marketing year. Summer prices will probably stay above the '70 levels. As always, price movements will be influenced by prospects for the new crop.

The crushing margin, difference between spot cash prices of soybeans and of oil and meal, averaged 26 cents per bushel in the September-May period—about half that of a year ago. The decline reflects the tight supply situation and higher prices, as well as a sharp increase in crushing capacity. Margins generally drop when the industry has enough capacity to fill demand for oil and meal.

Foreign spotlight: Focus on exports.

At an estimated \$7.7 billion, U.S. agricultural exports for the year ending June 30, 1971, broke all previous records. The 15-percent advance over 1969/70 was sparked by sharp rises in exports of soybeans, soybean products, and wheat. Also adding significantly to the increase were larger shipments of cotton, feed grains, slaughter cattle, inedible tallow, nuts, and dairy products (mainly under Food-for-Peace programs).

The European Community took about \$1.8 billion worth of U.S. farm products—over a fourth more than a year earlier. Japan—the top country market—purchased over \$1.2 billion worth.

United Kingdom. Britain's traditional butter suppliers—Australia, New Zealand and Western Europe—have been running too short on butter this summer to meet U. K. demand. Britain therefore temporarily suspended its butter import quotas through September 30 and has been buying some butter from the United States.

Purchases, out of CCC stocks, totaled over 12 million pounds up to July 1. Price was about 50 cents a pound. These sales of U.S. butter to Britain are the first since 1964, when a European drought reduced supplies. Any further sales this year will be made only as needed by U.K. market.

FARM

RURAL

MARKETING

CONSUMER

FOREIGN

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FARM INCOME... 3 faces in 1

Investor, land owner, and laborer. The farm operator is all three. ERS tells how to divide the income earned by each function.

In the mass of data published by USDA, one figure you won't find is a national average of the returns to a farmer's labor and management.

Still, more and more producers are asking, "How do my returns stack up with those earned by similar resources used by other businessmen?"

ERS economists have devised a method by which farmers themselves can determine the returns generated by the three main inputs that the operator brings to a farm—investment, ownership, and labor and management.

"Partitioning of financial returns" as the method is called, could prove a real asset to some producers.

For an idea of how the partitioning method works, consider the re-

cent ERS study—"Commerical Wheat Production." In this study, one farm was selected to represent the partitioning approach in each of the three major wheat regions—the Pacific Northwest, the Northern Plains, and the Central Plains.

The selected farms are viable operations—the ones most likely to still be in business 10 or 20 years from now. They are of sufficient size to take advantage of economies of scale. They employ enough resources to provide full-time employment for the operator, as well as a satisfactory income over the long run.

The representative operator is 40-50 years old, a good mechanic, and his technical and managerial skills are above average. He participates in the wheat and feed grain programs. His holdings—partly owned and partly rented—consist of the better cropland in the region. Nearly half the land is in wheat, a small portion in other grains, and

the rest in summer fallow.

The following data pertain to the representative farm in the Pacific Northwest region which takes in the adjoining parts of Washington, Oregon, and Idaho. (See table on next page for a summary of calculations.)

In 1969, this operator farmed 1,800 acres, of which he rented 1,050. His assets totaled approximately \$400,000.

His gross farm income, principally from sales of wheat and government payments, came to \$38,777. Adding the value of land appreciation and deducting rental payments brought the gross figure to \$33,915.

The return to the operator's resources, better known as net income, totaled \$12,994 (gross income less operating expenses, interest on debts, and depreciation on machinery, equipment, and the farm shop).

Now, to break down the net income by the partitioning method into the

three main components: the return to (1) investment, (2) ownership, and (3) labor and entrepreneurship.

Investment. The rate of return is the rate of interest prevailing in the money market when the investment was made. If the item was bought on credit, the interest on the loan becomes the rate of return; if the farm firm supplied the funds, the rate is what the farmer might have received had he invested the capital in a non-farm enterprise.

On the Northwest farm, part of the land—a $\frac{3}{4}$ section (a section equals 640 acres)—was acquired through inheritance. Even so, the tract is treated as an investment, inasmuch as the heir could have sold the land and put the proceeds in a mutual fund, for example.

When the land was deeded to the operator, its market value was \$58,000. The going interest rate was 4.5 percent. So, the return on this investment came to \$2,610.

The rest of the land owned by the operator consisted of a $\frac{1}{2}$ section bought for \$39,000 in 1964. The purchase was financed by a mortgage company at 5-percent interest. By 1969, the operator had repaid \$15,000 on the loan. His return on this equity for '69 was also figured at 5 percent, or \$750.

Returns to machinery, equipment, shop and operating capital—at their 1969 market value—totaled \$2,448, computed at the rate of interest the operator would have gotten had he invested his money with a savings and loan association.

All told, the return to the operator's investments came to \$5,808.

Ownership. This is sometimes defined as the legal claim to use-rights of a resource. The rate of return is whatever the resource—in this case, land—would generate if the use-rights were rented out.

Suppose, for example, the Northwest operator decided to rent out all his land in 1969. He'd probably have gotten the same rate of return realized by his landlords, after taxes and other maintenance expenses. Applying this rate of return (\$3.70 per

acre) to his own land, the net rental return to the operator would have been \$2,780, to which was added \$2,965 for appreciation in the land's value.

The \$5,745 total must be allocated among the investors to arrive at the operator's net return to land ownership. The mortgage company got 5-percent interest on its \$39,000 investment, or \$1,950. The party who willed the land to the operator was allocated \$2,610 for his investment (4.5 percent of \$58,000). And the remainder—\$1,185—became the operator's net return to land ownership.

Labor and entrepreneurship. This is a residual return; i.e., what's left of the net income after subtracting the returns to the investment and land ownership.

The computation: \$12,994 (net income) less \$5,808 (return to investment) less \$1,185 (return to ownership) gives \$6,001.

Thus, in 1969, this operator's labor and know-how had a worth of about \$6,000 by this method of partitioning returns.

This figure would, of course, change from year to year and from region to region. For example, in the recent ERS study of three com-

mercial wheat operations; the returns varied as follows: (1)

	Land ownership	Labor and entrepreneurship
	Dollars	
Pacific NW.		
1969	1,185	6,001
1967-68 av.	4,065	18,999
1967-69 av.	3,105	14,666
Northern Plains		
1969	8,615	12,938
1967-68 av.	7,342	8,250
1967-69 av.	7,778	9,813
Central Plains		
1969	4,185	7,927
1967-68 av.	4,133	8,384
1967-69 av.	4,151	8,232

Big Family Farms Score High in Efficiency

When does cost per unit of output of a farm plant reach a low point?

On U.S. farms, it's generally reached when the operation is (1) well organized, (2) fully mechanized, and (3) run by one or two men.

These are not "small" farms in the sense most people think of the word. They're bigger than most of the one- and two-man farms now in existence. They also require a sizeable capital investment.

A series of studies by the Economic Research Service came to the conclusion that most economies of

PACIFIC NW. FARM: DIVIDING THE RETURNS FOR '69

Gross farm income	\$38,777	
Value appreciation on $1\frac{1}{4}$ sections of land	2,965	\$41,742
Less share rent		7,827
Gross income after rent reduction		33,915
Less expenses:		
Operating expenses	14,253	
Other charges to the farm business:		
Interest on real estate debt (\$24,000 x .05)	1,200	
Interest on non-real estate debt (\$10,000 x .07)	700	
Depreciation on machinery, equipment and shop	4,768	20,921
Return to operator's resources		12,994

Partitioning the Return to Operator's Resources

Return to operator's investment in:		
The $\frac{3}{4}$ section of inherited land (\$58,000 x .045)	2,610	
His equity in $\frac{1}{2}$ section purchased land (\$15,000 x .05)	750	
His equity in machinery, equipment, shop (\$43,960 x .05)	2,198	
Operating capital (\$5,000 x .05)	250	5,808
Net return to ownership in land		1,185
Return to labor and entrepreneurship (residual)		6,001
		12,994

size (measured in cost per unit of product) are being achieved on large production units operated on a family scale.

For example, the economists found that the low-cost one-man hog farm included 400-plus acres and produced 150 litters of pigs a year. And it took a total capital of \$200,000 to yield a net return of \$23,000. (This assumes more normal hog prices than have prevailed in the past year.)

The low-cost one-man dairy farm had 235 acres, 40 cows, and required \$150,000 in capital. Net income on this type of dairy farm was low at the time of the ERS studies. But recent improvements in milk prices have raised the returns to the operator and management to \$15,000 or more.

The one-man irrigated cotton farm in Texas included 440 acres, of which 140 were in cotton. Total capital was almost \$300,000. This produced an operator-management income from the total farm operation of almost \$20,000.

The low-cost one-man corn farm in Illinois had 760 acres of cropland. It needed over \$450,000 in capital to yield a return of slightly over \$30,000.

There are exceptions to the generalizations above. Some large-scale producers can buy farm inputs at substantial discounts. Also, cattle feeding and some specialty crops have economies of size extending well beyond the one- and two-man size of operation. (6)

Georgia Peanut Growers Go Farm-Dryer Route

The drying of peanuts is a critical step in the production process.

In our No. 1 peanut State of Georgia, three-fourths of the crop is harvested within a 3-week period, and speed in curing the kernels is of the essence. Newly harvested, undried peanuts in bulk will mold within a few hours.

To avoid the rush on commercial dryers during the busy harvest sea-

son, some of Georgia's peanut farmers have installed, or have considered installing, their own drying facilities.

At what cost?

According to Georgia's agricultural economists, the purchase cost of a four-wagon drying unit is about \$6,700. Annual fixed costs are approximately \$1,000—including depreciation, interest, taxes, and maintenance.

The total cost for drying 144 tons a year works out to about \$10.75 per ton. To dry this volume of peanuts at commercial drying facilities would cost between \$5 and \$10 per ton. Regardless of volume, commercial cost of drying remains the same. However, the estimated \$10.75 for on-farm driers decreases to \$2.74 when 544 tons are dried.

For most small peanut farms, where less than 20 or 30 tons are produced, on-farm drying is not practical even though a one-wagon drying unit may be available.

Besides the cost factor, one must consider the problem of getting a competent operator for the individual drying facilities.

Not included in the cost analysis of the peanut drying systems are the benefits of being able to dry one's own peanuts as they are harvested. Delays in waiting for commercial drying may be costly (5).

Calves Steer Top Income For Northwest Ranchers

Record-high prices for calves pushed net income to a new high for Northwest cattle ranchers last year.

In the Northern Plains, net income averaged \$25,600, up 13 percent from 1969 and more than double the 1960-64 average.

In the Northern Rocky Mountains, net income averaged \$26,900, up 2 percent from a year earlier and also more than double the 1960-64 average.

The figures are for commercial ranches with 200 to 500 brood cows, usually high-quality Herefords or Angus.

The Northern Plains and the

Northern Rocky Mountains are among the most important cow-calf producing areas in the West. Their calves are sold to feeders in the Midwest and other areas.

However, they differ in methods of ranching. The Northern Plains (40 counties in southeastern Montana, northeastern Wyoming, and western South Dakota) is more subject to droughts and winter weather hazards and has far less public grazing land available. The Northern Rocky Mountains (most of 19 counties in southwestern Montana and east-central Idaho) uses extensive winter feeding and relies heavily on public land for summer grazing.

The Northern Plains last year had better than average range conditions and heavier market weights of calves—factors that more than offset a lower calving rate.

In the Rocky Mountain area, less favorable range conditions held market weights of calves and net ranch production below a year earlier and offset much of the income gains from higher calving rates and calf prices.

The Northwest's calving rate (number of calves marked and branded per 100 brood cows and heifers) is better than 90 percent, much higher than in the East and Southwest. Last year it was particularly high in the Northern Rocky Mountain area—95 percent. This was probably the highest calving rate for any major cattle-producing area in the United States.

The ranches of the Northwest are generally large because a cow and suckling calf require about 30 acres of grazing land.

When it came time to market their calves last year, Rocky Mountain cattlemen received an average of \$35.40 per hundredweight. This was \$2.50 higher than in 1969 and \$10 above the 1960-64 average.

Northern Plains cattlemen received an average of \$35.30 per hundredweight for calves delivered in the fall of 1970. This was \$1.70 more than they received for calves the previous fall and \$9.40 above the 1960-64 average. Market weights

were a record high, nearly 4 percent above 1969, mainly due to slightly improved range conditions and to crossbreeding.

A 1970 survey shows that most cattlemen in both areas carried debt. In the Northern Rocky Mountains, interest on debt averaged \$6,771 per ranch and in the Northern Plains, \$6,652 per ranch. (2)

Robot Peach Pickers Tried in California

Mechanical harvesters for cling-stone peaches are making a shake-down cruise through California orchards.

Experimental machines have been on the horizon some time, but commercial harvesting of cling peaches is just beginning to emerge. In 1968, for example, 3 percent of California's output was mechanically harvested. By 1970, the figure had risen to 10 percent.

The harvesters, which use the shake and catch principle to harvest ripe fruit, come in two types. The single-unit machine is particularly well suited for trees that can be approached from one side only. The machine grips the tree trunk, shakes the fruit onto its catching frame, and passes it on a conveyer belt to receiving and grading equipment. The minimum crew is usually considered to be three men—one driver, a grader, and a bin handler.

The two-unit machine uses the shaker and half a catching frame on one side of the tree. The other half of the catcher, the conveyer, and binning station form another unit on the other side of the tree.

Complete costs in using the harvesters will be itemized in a forthcoming report by ERS in cooperation with the University of California.

Meantime, these are among the preliminary findings of a survey taken by the study team:

Prices of the machines run from \$20,000 to \$30,000. Fuel and lubrication: 5-8 cents per ton of peaches. Repair costs can be sizeable, ranging from \$100 for small jobs to as much

as \$2,000 for major ones.

In the 1970 season, Modesto's machine operators earned \$2 to \$2.50 an hour; other crew members, \$1.75 to \$2. Some crews also got incentive bonuses of 8-10 cents per bin loaded. Typical harvest per hour: 6-10 bins of about 1,000 pounds each.

The area picked per machine varied from 50 acres to 100 during the July-September harvest season. From 750 to 1,500 tons of peaches were harvested by each machine.

As to quality of the fruit gathered, machine operators in 1970 said it was as good or better than what was picked by hand. Processors, however, noted this judgment was made on a "grade-out" basis. (Bruises sometimes show up many hours after picking.)

Unknown is whether the shaker's clamp can cause lasting damage to tree trunks, although some users reported that old orchards shaken for the first time actually showed new vigor the following season.

Growers who are considering using these machines are advised to check out the local demand for machine-picked peaches; some processors can efficiently handle only so many of these peaches at one time.

In shopping for a harvester, compare the alternatives. Be sure the selection meets the needs of the operation, and that the dealer can provide spare parts and adequate servicing of repairs. It might also be advisable to talk to company representatives, and to farmers who have their fruit custom-harvested. (3)

For Some Cotton Farmers: Greener Pastures in Stocks

Some Texas cotton farm owners would have been dollars ahead if they had switched their investments from the farm to the stock market for 1966-1969.

Take for example the owner-operator of a large irrigated cotton farm which requires a high capital investment. He could have invested the same amount of money in a portfolio of common stocks, gotten a job that

paid industrial wage rates, and earned more income.

That's a conclusion in a recent study of the Texas Southern High Plains, a 13-county area where 11 percent of the Nation's cotton is produced. The return to resources is low because of the relatively low price for cotton coupled with fairly high production costs.

The farmers showed a reasonable net profit—until you deduct a 6-percent charge on the capital used.

On an owner-operated irrigated farm of 960 acres, the farmer, over a three-year period (1966-69), netted his lowest income in 1969: \$16,100. High highest income was in 1968: \$24,660.

However, when you deduct a 6-percent capital charge on his assets, he would have "lost" \$10,570 in 1969 and "lost" \$3,230 in 1968.

Farming the same acreage, part-owners (who rent part of their land) and tenant farmers (who rent all of it) fared better during 1966-69. Part-owners netted a low of \$9,060 and, after the capital charge was made, "lost" \$1,200. Their highest earnings—\$16,310—fell to \$5,740 after taking out the capital charge.

Tenant farmers, who netted a low of \$6,560 in 1969, made \$4,040 when the 6-percent charge was deducted. The highest income—\$12,730 in 1968—dipped to \$10,330.

Those farmers who did not use irrigation showed more profit than the irrigators after the capital charge was levied—due in part to a smaller charge for capital.

Both the part-owner operator and the full-tenant operator of nonirrigated land earned more from cotton farming than if they had invested in stocks and worked in a nonfarm occupation. The tenant, who is essentially engaged in selling his labor and management rather than investing capital, earned substantially more.

Irrigation on farms tends to stabilize production, while nonirrigated farms face widely varying yields each year, depending mainly on amount and distribution of rainfall. (4)

Three in 10 Americans live in rural areas, and the nonfarm rural population is growing. Yet these areas have a lot of catching up to do—especially in income, housing, and health.

Today's rural resident is more likely to be poor than the city resident, live in substandard housing, and have inferior health and education services.

Such conclusions come readily from statistical data—and they're accurate. But they don't paint the picture of rural living in very much detail. It's like asking someone "What's a congressman like?" They're all as different as the regions they represent—and as different as their backgrounds and drives.

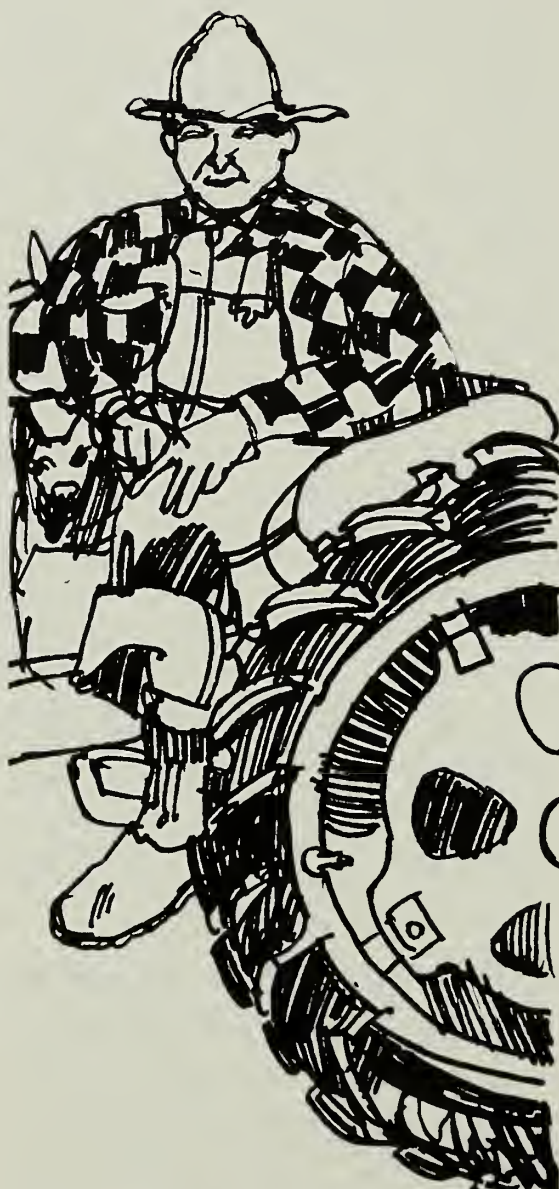
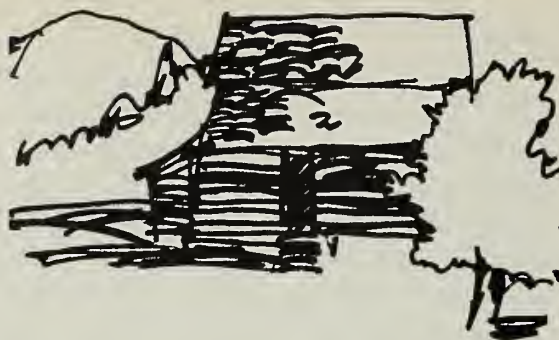
Three out of every 10 Americans live in rural areas—either in open country or in towns of less than 2,500 people. Only one-fifth of these actually live on farms. Most of the rural population makes its living the same way the rest of the population does—as schoolteachers and electricians, salesmen and machine operators, policemen and doctors, carpenters and laborers.

The rural nonfarm population is growing at a faster rate than the national average or even the metropolitan average. In the 10 years since 1960, this nonmetro nonfarm population grew 19 percent while farm population declined 36 percent.

Nonmetro residents are more likely to earn low incomes than those living in the city, even though their per capita income is rising at a faster rate than in metropolitan areas. While manufacturing is the most significant source of income, farming accounts for about 10 percent of the income in nonmetropolitan areas.

Rural residents, too, are more likely to have fewer—if any—specialized medical services available to them, and fewer fully accredited hospitals and colleges than residents of an urban area.

Their homes comprise 60 percent of the Nation's substandard housing



REALITIES OF BEING RURAL

—while their population accounts for 30 percent of the Nation's residents.

They're finding local government problems increasingly difficult to handle, especially with an inadequate tax base to finance much-needed community services.

Let's take a closer look at these generalities—into the realities of being rural:

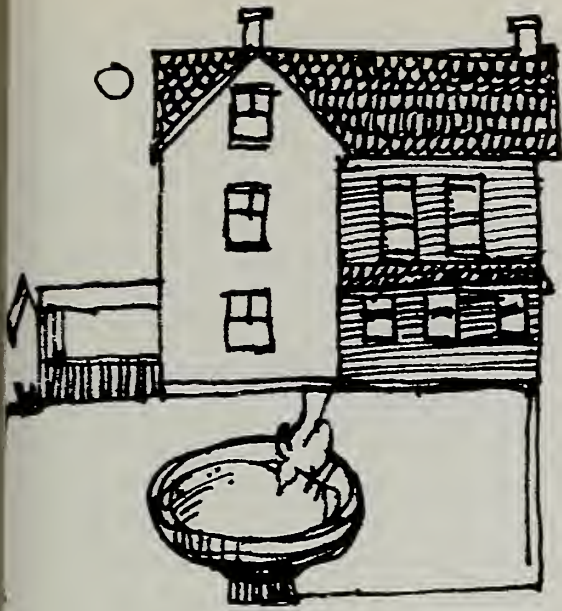
Three out of every 10 Americans live in rural areas. Around World War I, America began its great growth toward urbanization. While the rural population has remained fairly constant (54 million) through the last 50 years, urban population has grown from 54 million to 150 million. The proportions of the nonfarm and farm population in rural areas, however, have changed in those 50 years. Once, farm residents numbered three out of every five rural residents; now they number one in five.

The decline in agricultural employment—due chiefly to increased productivity—has been the main reason people have left farming to work either in rural nonfarm or urban areas. Those employed in agriculture now account for about 4 percent of our population—down from 12 percent in 1950.

About 5 percent have left the farm each year for the past 3 decades. Most have gone to the coast areas of the U.S., abandoning the Great Plains area in particular. Both North Dakota and South Dakota suffered a net loss in population in the decade from 1960 to 1970. The only other State to lose population was West Virginia.

He's more likely to be poor. The percentage of the poor was nearly twice as high for those living in nonmetropolitan areas compared to those living in metro areas in 1969.

The poverty level in 1970 for a



centives offered by small communities. Employment in construction, finance, insurance and real estate also grew at a faster pace in nonmetropolitan areas than in metro areas.

...And he's more likely to live in substandard housing. This is true even though considerable improvement in housing conditions has been made throughout the U.S. in the past 20 years. Residents in nonmetro areas in 1950 lived in 65 percent of the Nation's substandard housing, compared to 60 percent today. This was a decline of 7.2 million substandard housing units. On a national level, 1 out of 14 housing units is substandard, down from about 1 in 3 in 1950. The decline in substandard units is closely related to rise in family income.

More than 10 million new housing units were built between 1950 and 1970 in nonmetropolitan areas—7 million replacing substandard housing, 1 million for new households, and nearly 2 million to replace homes abandoned or destroyed by fire, demolition, etc.

He's more likely to have inferior health and educational services than the city resident. Although rural areas compare well with urban areas in the availability of general practitioners and hospital beds, they're far behind in availability of special medical services. There are also fewer nurses, dentists and pharmacists per 100 persons than in the metro areas.

As might be expected, the highest rate of infant mortality in the U.S. is in the most rural and poverty-stricken areas. Fewer persons in nonmetropolitan areas carry hospital insurance than in metro areas, with farm people having the lowest proportion. This is primarily because of low income levels.

In education, the largest gap between rural and urban living is at the college level. A college graduate over a lifetime can expect to earn about twice as much as a person with an eighth grade education, yet there is a relative deficit in higher education in nonmetro areas. In 1969, among males between the ages of 25

and 54, 68 percent of those living in metropolitan areas had finished high school and 19 percent had completed college.

This compared to 57 percent in nonmetropolitan areas having completed high school and 12 percent with a college degree. The greatest gap is among Negroes. In 1970 in the 25-44 year age bracket, fewer than 25 percent in the Negro farm population had completed high school.

Nationally, total educational expenses are high—three times what they were 10 years ago. While rural governments allocate the greatest portion of their revenues to education, they still are not able to match that spent by urban areas.

Rural areas spend around three-fourths as much per pupil as do urban areas. They usually have an inadequate tax base and an excessive number of local government units (rural areas have about one-fourth of the Nation's population and three-fourths of its units of government). Per capita, the nonmetropolitan communities also spend about 75 percent as much as metro areas on other services such as health and hospitals, police and fire protection, roads, sanitation, and welfare. This gap is widening. (8)



nonfarm family of four was \$3,968 and for a farm family, \$3,385. Per capita income in nonmetropolitan areas has been rising at a faster rate than in metropolitan areas for the past 40 years—although the dollar gap between the two has widened over the years. Per capita income for the farm population more than doubled in the 1960's, with nonfarm income now making up nearly half of the farmer's total income.

The Southeast—where per capita income is lowest—had the Nation's highest per capita income growth rate in the 1959-68 period, stimulated by increased employment in manufacturing and in government. The greatest acceleration in nonmetro income growth rate was in the Plains, rising from a rate of change of 2.9 percent in the 1950's to 6.2 in the 1960's.

Agriculture now contributes about 10 percent of nonmetropolitan personal income (down from 20 percent in 1950). And manufacturing, the largest single source of income, grew about twice as fast in nonmetropolitan areas in the past decade as it did in metropolitan areas. This reflects a predominance of blue-collar workers, lower land values and special tax in-

Sediment Control Starts in the Watershed

Controlling sediment—the end product of soil erosion—is a costly venture, and its success is hard to measure in dollars. Left uncontrolled, however, sediment will continue to cause damages in excess of \$500 million a year.

Damage from erosion takes many forms. Sediment may:

- Plug channels, creating or intensifying flooding;
- Reduce soil productivity when deposited on fertile land;
- Decrease storage capacity of reservoirs needed for water supply and flood control;
- Cause murkiness in rivers and streams, which endangers fish and wildlife.

Sedimentation begins in the watershed—the drainage area flowing into a region's lakes and rivers. Thus, watershed management is one effective way of minimizing sediment damage downstream.

Watershed control usually takes two forms. The first utilizes soil conserving practices on the land. These may include planting more cover crops, reforestation, or improved tillage practices on cultivated land.

The second uses manmade structures—such as desilting dams and gully plugs—to trap sediment before it escapes the watershed area.

A combination of the two systems is generally recommended for adequate watershed control.

Studies are underway on a 74,900-acre watershed in Mississippi to identify investment levels of an existing watershed management program. Data will eventually be used to determine the *net* benefits of watershed control.

Calculating the net benefits includes measuring the differences in damage before and after control, cost of reducing the damage, and the net values of other returns to the investment.

Over a 12-year period, 611 artificial barriers to trap sediment were erected on the study site. The reten-

tion structures varied in size, from small gully plugs with storage capacities of less than ½ acre-foot to barriers exceeding 5 acre-feet. (1 acre-foot = 43,560 cu. ft.)

The average construction cost for the barriers is estimated at \$4.61 per acre, or a total of \$345,469.

Meantime, nearly 40 percent of the watershed had been planted to timber. The investment for reforestation was \$325,310; average per acre, \$4.34.

The total investment in watershed management over the 12-year period came to about \$671,000, or \$8.95 per acre.

The final test of whether retention structures and reforestation have done an adequate job of reducing damage must take into account the benefits gained as well as the costs incurred. (9)

States Take Legal Tack On Animal Waste Problems

Increasing concern is being expressed over the environmental hazards posed by animal wastes.

Several States in the North Central Region have enacted or are proposing specific legislation to provide a more socially acceptable balance between the levels of animal production and environmental pollution.

Other North Central States are attempting to achieve such a balance through enforcement of existing, general statutes. General environmental statutes focus primarily on water quality. But they are also interpreted as being applicable to animal wastes to the extent that these may pollute surface or ground waters.

Missouri, Wisconsin, Ohio, and Michigan have no laws directly pertaining to animal feeding operations. In Missouri, however, the Water Pollution Board is authorized to investigate any person or group suspected of contaminating State waters, and to bring legal action if warranted.

Similarly, Wisconsin waterways are controlled by the State's Department of Natural Resources.

An Ohio law on solid wastes specifically includes those from the agricultural sector, but has been interpreted to exclude the smaller farm operations. Only large-scale feeding operations are currently under its jurisdiction. Similar interpretation has been given to Ohio's water quality statutes.

Under Michigan's 1970 Environmental Protection Act, any person or group may bring suit against a citizen, corporation, governmental unit, or other legal entity suspected of fouling water, air, or other natural resources.

Complainants need not demonstrate personal injury or damages as a justification for bringing suit. To date, however, most problems of animal waste pollution have been handled by Michigan's Water Resources Commission and Air Pollution Control Commission—the State's regulatory agencies for environmental control.

Iowa, Indiana, Minnesota, Nebraska, and Kansas take a more direct approach. Current legislation requires feedlot operators to register with their respective State regulatory agencies. Registration entails providing a detailed breakdown of present and proposed operations, including the number and type of confined livestock, and the name and location of any watercourse that may be subject to contamination.

In Illinois, a comprehensive Environmental Protection Act passed last year covers a broader spectrum—air, water, land, and noise pollution. Specific regulations pertaining to livestock farms are not yet fully developed.

But provisions of the Act are currently applicable to confinement feeding operations if a concentration of odors, noise, or drainage is detected beyond a farm's boundaries.

In North Dakota, regulations are pending that would control waste from certain livestock enterprises, primarily feedlots. Operators of any new or existing feedlot would be required to apply to the State Department of Health for approval of waste handling and discharge practices

within 6 months after the regulations become effective.

South Dakota is currently considering similar regulations for the specific control of wastes from livestock enterprises. (11)

Campsites Are a Weakness In 'Land of Enchantment'

One route a scenic but economically depressed area can take out of its plight is to attract more tourists—and dollars—in.

And one way to do that is to have more satisfied customers.

In a recent sampling of more than 2,000 visitors in north-central New Mexico, dissatisfactions concentrated on the inadequate or poorly maintained restrooms, campsites, and campgrounds available in this area. More attention to maintenance and cleanliness—which would cost little—would create better impressions. And some additional facilities would seem to be justified by the tourist trade.

In this area, word-of-mouth is the most successful kind of advertising. More than 50 percent of those surveyed had either been in the area before or came upon the recommendation of a friend. Travel agencies and formal advertising had influenced only 1 in 20 visitors.

The Upper Rio Grande area included in the recreation study is characterized by low incomes, high unemployment, and limited opportunities for improving living levels. Development of recreation would doubtless benefit the region's economy.

The five-county study area is a natural for recreation, with its forests, lakes, streams and mountain scenery and its brisk dry climate. Its approximately 7.5 million acres includes more than 2 million acres in two national forests, five State parks, 14 Indian pueblos, missions, ghost towns, and numerous historic sites—including Santa Fe, founded in 1610.

Most of the visitors surveyed said they came to this part of New Mexico to enjoy the scenery, the pleasant cli-

mate, and the local culture.

Most visitors had higher-than-average incomes. Over half reported family incomes of \$10,000 or more. Three out of four visitors had incomes of at least \$7,000, and they spent a proportionally larger share on recreation than those with lower incomes.

Forty-five percent of the family heads had college degrees, and another 24 percent had training beyond high school.

Families spent an average of \$126 while in the area—with food, lodging and transportation representing three-fourths of the total.

Skiers spent the most money annually, and campers and picnickers the least on equipment and other recreation expenditures. (12)

Plains Changes

Births outnumbered deaths by about 2 to 1 in each of the 10 Great Plains States last decade. Even so, many counties—64 of the Plains' 823—experienced a new phenomenon known as "natural population decrease." More people died than were born, as outmigration of young people for 30 years left comparatively small numbers of childbearing adults.

Natural decrease differs from absolute population decrease, as it doesn't take into account changes in population due to migration.

Three-fourths of the counties with natural decrease were in Texas and Kansas. The affected areas were predominantly rural and agricultural.

In 50 of the 64 counties, natural population decrease was accompanied by net outmigration, and population declined.

In two counties—Coal County, Okla., and Mills County, Tex.—there was net immigration. Nevertheless, both lost population in the sixties because the number of new residents failed to offset the natural decrease.

Population gained in 12 of the 64 counties. Enough new residents arrived to cancel out the natural losses.

In the next 10 years, more Great Plains counties may experience a natural decrease unless outmigration of the young is reduced. (10)

Cropland Recedes In Urban Northeast

The North Atlantic Water Resource Region embraces 271 counties plus 25 independent cities in 13 States, and the District of Columbia. It covers an area of about 106 million acres. In 1960, it was home to some 45 million people—25 percent of the Nation's population.

This region may be experiencing a shift of land to urban areas that's greater than any other area of comparable size in the country. An idea of how much land is going out of agriculture is provided by the latest in a series of airphoto analyses by ERS.

In 96 selected counties in the North Atlantic Resource Region, urbanization claimed 12,000 acres a year during 1950–60. Roughly half the land urbanized was being used for crops prior to development.

Most of this converted land (four-fifths) was of land use capability classes I, II, and III. Characterized by well-drained soils and fairly level terrain, the land in these classes is ideal for crop farming as well as for urban uses.

Urban developers generally don't bid for land in classes IV–VIII, which is apt to have problems of drainage, soil slippage, unstable subsoils, and rough terrain. Soils with good internal drainage are a "must" for housing that depends on septic fields. Roads and utility installations cost less to build on level lands.

About 85 percent of the formerly rural land went for residences during 1950–60, 5 percent for industrial uses, and the balance for recreation, institutions, commerce, and airports.

For the region as a whole, each person added to the population during 1950–60 was associated with a land conversion of somewhat under a quarter of an acre.

The per capita conversion averaged .20 of an acre (two-tenths) in those counties classed as Standard Metropolitan Statistical Areas (SMSA's). Outside the SMSA counties, the rate was double. (13)

Togetherness In The Pork Industry ?



A start has been made at linking together the steps that transform a piglet into a pork product, but the industry has not decided just how to achieve this coordination.

Even before a baby chick hatches, its future has usually been preordained—especially if it is destined for the commercial broiler world.

At every stage, from nest to supermarket, the bird is kept under the supervisory wing of the processing firm, feed manufacturer, chainstore, co-op, or whatever company owns or controls the production and marketing elements. In other words, broilers are produced by an industry that is about 95 percent vertically coordi-

nated (or integrated, if you prefer). Only about 20 big firms do most of the commercial slaughtering.

Piglets—and the hog-pork industry they represent—are quite a different story.

Very few of the packing firms engaged in hog slaughtering are vertically integrated—17 out of 709 firms in 1969. Out of the 81 million hogs slaughtered, a mere 43,000 were owned by the integrated firms.

The possibilities for coordination are the same as they were in the case of poultry. Generally speaking, there is a choice of three forms that coordination can take. Which one of these is the moot question now being considered by members of the hog-pork industry:

- Ownership by one firm of two or more stages in the production and marketing sequence (i.e., vertical integration)?

- Production contracting (as with broilers) where the packer owns the animals but has someone else feed them?

- Open market through which the farmer/owner produces and sells his animals, using market prices and trends as guidelines in achieving coordination?

As of now, the open market system still prevails in the hog-pork industry, where production continues to lie in the hands of a very large number of "family farmers."

True, a small number of packers and processors in the hog-pork industry contract with farmers to feed some hogs—especially in areas where it is hard to maintain an adequate supply of hogs for plant operations.

Some producers also have been tied in with feed manufacturing companies in their contractual efforts. Varying proportions of production financing come from the packers, feed companies, and producers themselves.

In some cases, risks associated with such contracts are selectively hedged by using the futures market.

Facing the facts of today's economy, this trend toward greater specialization and coordination will continue, although at a much slower pace than that set by the broiler industry and most likely in different forms.

There are some basic differences between poultry and hogs that affect ease and rapidity of integration:

The pig—a mammal. Factory production of little pigs is much more complicated than the incubation of chicks. Sows are nervous, clumsy mothers and can kill their pigs while trying to protect them from some imagined danger. A few hog producers have successfully taken the pig away from the sow the day it was born, but this has not yet proved feasible on a commercial scale.

Feed conversion. More feed is needed to make a pound of pork than a pound of broilers—about 4 pounds

for pork versus 2 for broilers. This difference tends to keep hog farms closer to the area of feed grain supply. Eighty percent of hog production, for instance, was in the 12 North Central States in 1969.

Diseases. When the broiler contractor serviceman sees disease loss, he tests a few birds, diagnoses the problem, and recommends medication to be added to the ration.

While improvements have been made in controlling swine diseases, hogs are still vulnerable to catastrophic losses.

Genetics. A hen may produce 200 progeny a year; thus improved strains are quick to materialize. A sow, on the other hand, will have perhaps 20 offspring a year.

Consumer brands. Since a broiler is an unbranded product, there are few barriers to getting into the broiler slaughter and processing business. Any major feed company could buy or build the required processing plants. The profits in the pork industry, however, lie with the branded products. National brand franchises have been developed for hams, bacon, and sausages over a period of years and will not be dis-

placed easily.

Feed manufacturers and meat packers now appear to be the most aggressive movers toward integration with pork producers.

Over the past decade, some of the larger hog producers have been doing their own feed manufacturing.

Feed manufacturers, of course, are interested in preserving the market for their basic products—feed and related services—as producers get larger and more specialized. Some are willing to expand into complementary activities such as sow leasing arrangements to assure feed business.

Meat packers, on the other hand, would like to assure an even flow of hogs into the plant so they can use facilities and labor more efficiently. They are also interested in more uniform quality.

Yet most meat packers now appear interested in contracting or owning only a small part of their slaughter requirements. Drawbacks to further expansion include the high capital requirements and the specialized management needed to oversee complex producing operations.

In addition to packer and feeder, a third party in the chain linking pig to porkchop is the retailer. He has a strong interest in keeping prices, quality, and supplies stable.

With fluctuations at both farm and wholesale level under the present system that swings along with the hog cycle, retailers must often adjust retail margins. Some are therefore beginning to think in terms of annual contracts with processors or in terms of advance buying.

Generally, however, retailers appear to be satisfied both with pork products and the distribution system. They are therefore not likely to be the prime pushers for vertical coordination.

The hog producer himself is likely to be among the slowest to jump at a chance for total coordination.

The industry is characterized by a large number of producers: about one out of every three farms raises hogs. These are relatively small,

family-type operations. They produce with their own money, buy inputs with their own earnings, often grow their own feed, borrow on their own credit.

A few producers, however, are experimenting with large-scale production and new coordination arrangements. How successful these experiments prove to be will largely determine how soon the hog-pork industry will embrace vertical coordination and what form it will take. (14)

Cotton Mix-Up Can Be Profitable

Textile mills can "blend" themselves some economies in the use of raw cotton, a new study indicates.

At present, mills blend small percentages of cotton discounted for micronaire with cotton that is within the accepted range to form a mill mix. However, the study by ERS and the Agricultural Research Service says that greater quantities of these discount cottons can be used with satisfactory results.

Micronaire is the industry gauge for fineness of cotton—the higher the micronaire, the coarser the cotton. Cottons in the range of 3.5 to 4.9 are considered as being acceptable. Cotton above and below this range is sold at substantial discount in the market.

Specifically, the researchers found the mix could contain up to about one-third cotton with a 5.2 micronaire level without serious processing and quality problems. Higher proportions of high-micronaire cotton, however, would produce both more end breakage and loss of yarn quality, particularly yarn strength.

In tests using cotton below this range, the study found that if the blend had more than 5 percent cotton with micronaire levels as low as 3.2, the likely result would be both processing and quality problems, including dyeing problems.

The study compared blended and natural micronaire mixes on the basis of their spinning, finishing, and dyeing performance. (15)

Up In Canada . . .

With the changing U.S. hog marketing and pricing system, and the declining importance of traditional terminal markets, trade circles are looking at various alternatives that might be open to them.

The Canadians have already put into effect one alternative method of making the open market system work more efficiently for them. It is known as the Ontario teletype auction system. The way it works:

All hogs sold in Ontario go through a single marketing system which is run by the hog marketing board. Grading is compulsory. Packers bid on each lot of hogs in which they are interested. Potential competition in buying each lot of hogs under this system is much broader than in direct buying systems such as we have in the United States. (30)

Dairy Industry Faces Pricing, Power Changes

The process of getting dairy products from the farm to the home is expected to undergo drastic changes this decade.

All signs point to greater centralized control of the disposition of the entire milk supply; pooling on a much larger basis than the present market pools; and increasing dominance of supermarket groups as an outlet—a factor that will encourage the growth of large processors to serve the large-volume buyers.

All this foreshadows new policies for the pricing of milk and dairy products. The system that has worked well for 35 years will have to be changed drastically.

Foremost among the prospective market changes is the continued expansion of large regional dairy cooperatives and of supermarket groups that will increasingly set the pace of competition and prices in the packaged milk market.

Supermarkets now account for about a third of all milk sales. Their growth has meant that fluid milk handlers no longer have the market power they once had: they're sandwiched between large and powerful buyers and sellers.

In the 1950's, the average retail store carried as many as six brands of milk virtually on consignment, with the milk handlers providing full service and effectively setting the price. Today the average retail store carries its own private label and maybe one other brand. These retailers thus exert a stronger control over pricing than formerly.

Cooperatives, too, have been growing and gaining power. Eight large federations of cooperatives, formed in the early 1960's, now control about 44 percent of the nation's milk supply. Since 1967, other cooperatives have merged into large producer organizations, which now account for about 22 percent of the national milk supply.

Fluid milk is expected to be essentially all one grade by the end of the

1970's, with the virtual end of manufacturing grade milk. With one grade, the pricing structure of the entire dairy industry will change.

At the production level, dairy farms will grow larger and fewer in number. From about 300,000 today, the number may drop to 100,000 by 1980. Farms of less than 50 cows will virtually disappear. The typical herd may well run to several hundred cows.

However, there is no reason to expect that a major proportion of these dairy operations will be other than two- or three-man family farms. The exception would be if substantial incentives were provided for processors to get into milk production. (16)

Safflower Meal—Byproduct In Search of Perfection

Safflower, introduced as a commercial crop in the U.S. after World War II, is here to stay.

The plant is grown for its oil—popular as a highly unsaturated edible oil in margarine and in cooking and salad oils and as a base for paint.

But the byproduct of the seed crushing operations for oil, safflower meal, has several obstacles in its path toward increasing its demand.

Most of the meal is used in dairy and beef cattle feeds—primarily because it is a cheap source of protein. Sales of meal account for about one-fifth of the crop's value and have ranged from 135 to 305 million pounds in recent years.

However, feed manufacturers have some complaints about the meal: its relatively high fiber content (31 percent), its low energy level, its bitter flavor when used at high levels, and the tendency of its pellets to fracture.

A relatively new high-protein safflower meal is commercially available and hurdles most of these pitfalls. This meal is made by partially dehulling the seed (removing two-thirds of the hulls). Hulls are difficult to remove from safflower kernels and this adds to the cost of producing high-protein safflower meal.

The hulls constitute 40 percent of the seed (compared to cottonseed's 25-percent hull and soybean's 8 percent) and are extremely tough and largely undigestible even by ruminant animals. Partial hull removal greatly reduces the amount of fiber in the meal. And since dehulling enables a more concentrated product, the protein content is twice that of regular meal and the energy level is much higher. Regular safflower meal contains about 20 percent protein, whereas partially dehulled meal contains about 42 percent protein and only 15 percent fiber.

Feed manufacturers in California and Arizona, where the safflower plant is grown, say they plan to use more of the partially dehulled safflower meal in poultry rations. Indications are that the dehulled, more highly concentrated protein meal can be sold at even a half cent more than cottonseed meal—the most widely used high protein feed ingredient in the area—and still increase its share of the mixed feed market.

Other improvements that would increase demand for the meal include development of a thin-hulled seed variety and one without a bitter flavor when used at high levels, improvement of hulling methods to decrease the fiber content, addition of fat to the meal to increase the energy level, and finer grinding of the meal to make better pellets.

Although dehulling is one of the best ways to improve demand for the meal at present, it poses another problem—what to do with the hulls. At times, the hulls sell for \$10 a ton or more; at other times they are given away by the processors. They are not good bedding material for animals because they are not very absorptive, nor do they burn readily because of a high silica content. Usually they are reground and used as a filler in cattle and horse feeds. Possible future uses might be as a filler in concrete, in reinforced plastics or in impregnated pipe, or as a decorative construction material, glue extender or abrasive in polishing applications. (17)

Age: 35
 Sex: Male
 Profession: Factory worker
 Income: \$6,000

This man is almost always in the daily news—albeit indirectly—because he falls within a group of Americans that appear to be the most numerous, regular cigarette smokers. And cigarettes account for about 80 percent of the tobacco that consumers buy—including cigars, smoking and chewing tobacco, and snuff.

For these products, U.S. consumers paid out \$11.7 billion last year—about 2 percent of the income they had left after taxes. Their 1970 tobacco bill was 2½ times that in 1950, mainly because of hikes in prices, much of which was due to increased taxes.

Occupations and living patterns emerge in nationwide surveys of the past 15 years as important factors associated with the dominance of cigarettes in the tobacco picture.

Age seems to be a more telling characteristic than income or profession.

From the age of 18 up to age 30, the proportion of male cigarette smokers rises. It reaches peak levels between 30 and 40. Thereafter it falls off at an accelerating rate, especially after the early 50's.

Occupationally, the highest proportion of confirmed cigarette smokers—about 70 percent—is among operatives, e.g., apprentice auto mechanics, bus drivers, laundry and drycleaning workers.

Income appears to have less effect than age or profession on smoking rates. The proportion rises from

about 47 percent in the under-\$3,000 group to around 60 percent in groups earning about \$6,000. It then falls back to around 50 percent in the \$10,000-and-over class.

Women cigarette smokers continue to be outnumbered by men in all age categories. But the gap between male and female smoking rates has narrowed in recent years: 42 percent for men and 31 percent for women, according to the latest survey (January-March 1970).

The smoking rate of women in upper income groups is about twice that of the under-\$3,000 and the highest proportion of women smokers is found where the head of the household is in clerical, sales, or service work. Relatively few women on farms smoke—only 15 percent.

Men under 55 have given up smoking at a substantial rate over the



Profile of a Smoker

From Quid to Cig

Not until the early 1920's did the cigarette supplant the "chaw" as the leader among American tobacco products. "Snoose, stogie, and smokestack" had their followers, too, but never gained the dominant status long enjoyed by chewing tobacco.

The first manufactured form of tobacco in the Colonies was a "twist" of cured leaf. Sold by the yard, it could be chewed, sliced for pipe, or even powdered to snuff.

Next came the "plug." And chewing of tobacco soon became a widespread, peculiarly American habit associated with the common man.

Chewers were consuming tobacco at the rate of 3 pounds per person by 1890, and around the turn of the century they had a choice of 12,000 packaged, registered brands. But shortly thereafter, chewers became less numerous as society became more urbane and ordinances against spitting proliferated.

Meanwhile, the cigarette industry was only a small business, catering mainly to elite New Yorkers. Factory girls who handrolled the cigarettes were reportedly comely and "genteel"—but definitely slow.

Young James Bonsack may have watched them. In any case, he patented the first practical cigarette machine on Sept. 4, 1880. J. B. Duke, of Durham, N.C., perfected it. With his mass output he could sell a 10-cigarette pack for a nickel instead of the former standard dime.

The "blended" cigarette appeared about 1913. It combined major U.S. leaf strains (instead of just one, often Turkish).

Then came massive publicity. American soldiers had become used to cigarettes in World War I. Manufacturers sought other customers through huge ad campaigns featuring catchy slogans and appealing visuals. A number of women began to smoke, and the cigarette became part of a "flapper's" charisma.

Cigarette sales surged. By the early 1920's, they pushed ahead in the tobacco market. By 1935, Americans used half their tobacco as cigarettes. In the early 1950's, the cigarette share reached 80 percent and has held that share the past 2 decades despite a decline in per capita use. (19)

past 15 years, while older smokers apparently have not broken the habit.

Women have moved in the other direction. The proportion of distaff smokers in every age group except 18-24 was higher last year than it was in 1955.

However, since the Surgeon General's Report of 1964 and the subsequent wave of anti-cigarette commercials, there's been an overall decline in the percentage of cigarette smokers—both men and women—from 41.5 percent to around 36 percent last year.

(Note: These surveys usually underestimate the true percentage of smokers. Some groups are omitted, e.g., the armed forces, people in Federal institutions, and teenagers under 18.)

Meanwhile, per capita use of cigarettes has fallen off from a peak of 4,345 per person in 1963 to around 4,000 the past 2 years. And these figures are not based on surveys, but on actual cigarette consumption data and the population 18 years and over.

With continued smoking-health publicity, more tax boosts, and generally higher cigarette prices, it's possible that U.S. cigarette consumption will decline 10 percent between now and 1980.

Cigar sales are expected to increase, and use of other tobacco products may hold up fairly well.

But the present trend of using less

tobacco per cigarette and per cigar is expected to continue in the 1970's. Thus, per capita consumption of tobacco will decline appreciably (unstemmed processing weight basis). In the past 2 decades it has already dropped from around 12 pounds per person to about 10 pounds—(nearly 8 pounds in the form of cigarettes).

The quantity of U.S. tobacco used by manufacturers in 1970 was about a tenth less than 2 decades earlier. Most of the decline has been since the mid-1960's.

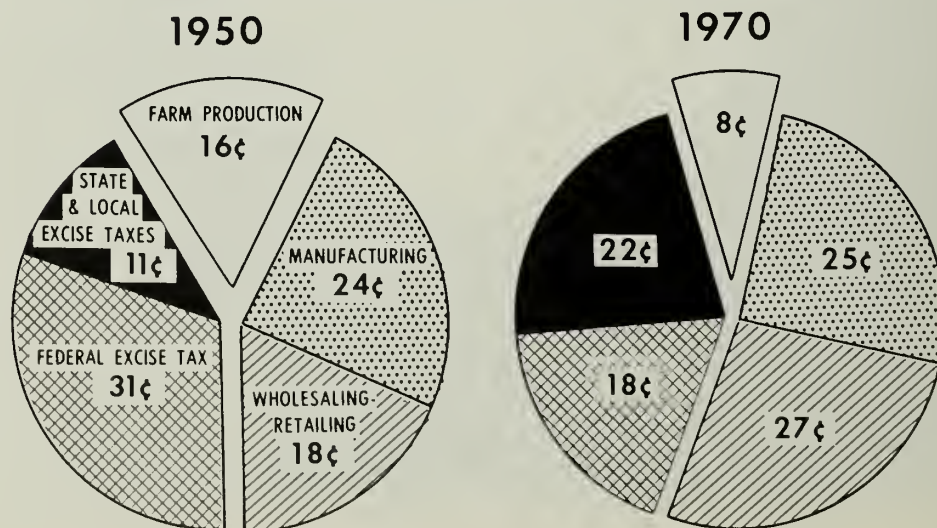
The farmer's share of the consumer's tobacco dollar may continue to shrink as use of U.S. tobacco per cigarette and cigar is cut back further and manufacturing-marketing costs and excise taxes edge upward.

Even now, despite higher farm prices—government-supported in most cases—the tobacco producer gets only half as much out of the tobacco user's dollar as he got in 1950 when his share averaged 16 cents.

Manufacturing and wholesaling-retailing costs now take more than half the tobacco dollar. Since 1950, when these costs represented 42 cents out of the dollar, the marketing share has risen faster than the manufacturing share.

Taxes, as a part of the consumer dollar spent for tobacco only, total about a penny more now than they did in 1950. Federal excise taxes show a long term decline, but State and local taxes have doubled. (18)

THE TOBACCO USER'S DOLLAR



Retail Food Shelves Often Cleared by Manufacturer

Keeping track of the 6,000 to 7,000 items displayed in today's food stores would stagger the mind of any store manager. Happily for him, some of these products are monitored directly by the manufacturers.

While many food manufacturing companies employ a variety of methods to withdraw unsold, outdated products from retail stores, others have no monitoring policies whatsoever.

Some of the manufacturers that don't use direct monitoring procedures simply expect their products will be sold before shelf life expires. Other companies keep close tabs on their production/sales relationship so that retail storage time will be held to a minimum.

Large supermarket chains usually feature a line of "in-house" brands. These products are monitored by store personnel who rotate the stocks and remove outdated products from display shelves.

Manufacturers that use direct store level monitoring frequently have their own sales personnel make deliveries and remove overage merchandise. An example is the bakery routeman who replaces day-old bread with freshly baked products.

Other companies dispatch sales representatives to remove outdated merchandise, either at specified intervals or on the basis of spot checks.

As a further measure, quality control departments of some manufacturing companies arrange for independent sampling agencies to pick up product samples from retail outlets for laboratory analysis. Such product sampling is considered a form of monitoring, for it provides a check on distribution, rotation, and the monitoring efficiency of sales personnel.

Food manufacturers sometimes request store managers to rotate their stocks and return outdated goods. Store managers are reimbursed for the commodities they return. (20)

The Mink Pinch

Santa will cut back considerably on upcoming deliveries of mink coats if he relies on U.S. pelt production for the makings.

The Nation's mink ranchers harvested only about 4½ million pelts in 1970—a drop of 20 percent from 1969. And 1971 output is likely to dive further since ranchers bred about 30 percent fewer females to produce kits for pelting late this year. Reductions are sharpest in "exotic" colors.

The drop in 1970 pelt output paralleled the percentage of "out of business" signs, as the number of mink ranches declined 20 percent to a total of 2,227.

The mink slump is linked to the general economic slowdown, which reduced demand; competition from cheaper Scandinavian pelts; perfecting of European dye processes that simulate natural color mutations; and some loss of mink's prestige as a status symbol. (21)

Who's Taking Castor Oil In Million-Pound Doses?

What's your rating on a quick castor oil quiz? (Check one or more of the possible answers.)

Castor oil is used as:

- (a) a medicine
- (b) a lubricant for planes
- (c) an ingredient in explosives
- (d) a softener for artificial leather
- (e) a quick-drying base for paints

You're right if you picked all five answers. Which is its most popular use?

You're wrong if you picked (a). Despite the fact that this is how castor oil became famous, its medicinal uses now account for only about 1 percent of U.S. consumption.

Most of our castor oil comes from Brazil. U.S. production from domestically grown castor beans in recent years has accounted for around 15 percent of a total of about 150 million pounds consumed yearly. The U.S. is the world's leading importer and consumer of castor oil.

It is in demand more than ever for its fine qualities as an ingredient in

lubricants, plasticizers and waxes. It is the starting material for making sebacic acid used in synthetic lubricants for jet aircraft, plastics and nylon bristles. One of its largest uses is as a quick-drying base for paints, lacquers, and varnishes. Then, too, it is used in cosmetics, soaps, and printing inks.

Even the meal—which is what's left of the castorbean when the oil is removed—is finding new uses.

The meal was once toxic and could only be used as fertilizer, but modern technology has made removal of the poisons possible, and castor meal is today also used as a nutritious cattle feed. (22)

Military Food Spending On the Retreat

The food bill of the U.S. armed forces in 1970 was the smallest in 6 years. At \$813 million, central procurement purchases declined 11 percent from the \$913 million spent a year earlier. In addition, some perishable items—mainly fluid milk products and fresh fruits and vegetables—were purchased locally. By volume, the 1970 food consumption by the military (including milk purchased locally) amounted to 1.5 percent of total U.S. food use.

The decrease occurred in nearly all major food categories.

The largest purchases included beef and veal, dairy products, and fresh fruit and vegetables.

Military procurement will probably drop again in 1971. But the decline likely will be smaller than in '70 because buying levels are now near those in the years preceding the Vietnam mobilization.

In 1964, prior to the Vietnam buildup, the military spent \$780 million (central procurement) to feed their troops both at home and abroad. By 1966 the tab for armed forces' rations reached \$1.1 billion.

Military use as a percent of total food use was about 2.2 percent in 1966, considerably less than the 4½ percent in 1951 during the time of the Korean conflict. (23)

E.C. Wheat: Food for Feed



The European Community is making headway in its efforts to divert more surplus soft wheat into use as feed, despite the traditional reluctance of EC farmers to mix bread grains in livestock rations.

Livestock in the European Community may be eating a lot more wheat in the next several years. The ERS estimates that 10 to 11 million metric tons of wheat will be fed in 1975—compared with under 5 million in 1960. In 1969-70, the amount of wheat fed rose to around 9 million tons, but is expected to decrease somewhat in 1970/71 because of a smaller crop.

The actual tally in 1975 will hinge on the availability of other feed grains, and the effectiveness of government efforts to reduce wheat production and divert more of the Community's abundant wheat supplies to livestock rations.

Expanded wheat feeding may dis-

place feed grain imports. This carries serious implications for the U.S., which counts on the EC as a major outlet for feed grain exports.

Grain imports from the U.S. accelerated during the 1960's because the Community's feed grain production failed to keep pace with its expanding livestock industry.

Meantime, soft wheat output grew but domestic milling requirements remained unchanged. The EC then found itself overstocked in wheat, and deficit in feed grains.

Aside from exporting surplus soft wheat, there are basically two ways the EC could alter the imbalance between wheat and feed grains.

A substantial shift from soft wheat production to feed grains might be effected through lower wheat prices relative to feed grains, acreage allotments, or other quantitative regulations. Community policy, however, doesn't favor imposing on agricultural production.

The alternative is to expand the use of wheat for livestock feed—which currently takes a fifth of the annual crop. Most is fed directly on farms.

France and West Germany account for over 90 percent of the wheat fed in the Community. They will remain the biggest users, although wheat-feeding is expected to pick up throughout the EC.

By 1975, France's livestock are expected to use 6.5 million metric tons—almost double the 1965 total. Wheat used for feed in Germany is projected to rise from 1.6 million tons to 2.2 million.

In Italy, Belgium, and Luxembourg, feeding levels are expected to remain relatively low, although somewhat above the intake of the mid-1960's.

Wheat-feeding in the Netherlands also peaked in the early 1960's. Projections for 1975, however, indicate a substantial expansion.

The biggest barrier in promoting wheat for feed is its high price relative to other grains. Uniform grain prices became effective throughout the Community in July 1967. Prices were set roughly midway between the highest and lowest prices prevailing in the EC during 1964/65.

High wheat prices in some member countries prior to unification resulted in a set price of \$106.25 per metric ton of soft wheat. Prices for corn, rye, and barley ranged between \$90 and \$94.

Efforts have been made to more closely align wheat and feed grain prices to reflect their relative feeding values. Since unification, prices for wheat have remained unchanged, but those for feed grains were increased on two occasions. By 1975, the wheat/feed grain price ratio is expected to taper further.

Narrowing the price gap serves a dual purpose: it may influence a shift from wheat to feed grain production, while inducing the substitution of more wheat in livestock rations.

As part of its program to promote wheat-feeding, the EC subsidizes the denaturing of wheat. Denaturing—applying fish oils, dyeing, or mixing other coarse grains with wheat—renders the wheat unfit for human use.

Growers receive the full support price when they sell wheat to official agencies for denaturing. After denaturing, the wheat is sold for feed at a lower price that's more in line with other grain prices. The denaturing premium—difference between the support price and the final selling price—is subsidized by the EC's Agricultural Fund.

Denaturing subsidies are based on the difference between wholesale wheat and barley prices, plus the technical cost of denaturing. The premiums were originally administered with extreme caution to prevent denatured wheat sales from interfering with the market for corn and barley.

As wheat surpluses mounted, however, premiums were raised, and denaturing regulations were liberalized.

While exerting a severe economic strain on the Agricultural Fund, the payment of denaturing premiums to reduce surplus wheat supplies may be more economical than exporting. Exports must also be subsidized—usually at considerable expense—to be competitive on the world market.

Efforts to move surplus wheat into feed uses have been moderately suc-

cessful, despite a traditional reluctance among EC farmers to use bread grains in livestock rations.

Knowledge of the excellent feeding qualities of wheat is apparently not as widespread in the EC as in the U.S.

Experiments in the U.S. showed wheat's feeding value to be higher than that of corn, barley, oats, grain sorghum, and rye, for all classes of livestock except lambs.

Wheat didn't fare as well in Germany's feeding experiments. Corn, rye, and grain sorghum were rated substantially higher as rations for hogs and dairy cattle. Wide acceptance of the German findings may have a restraining influence on the amount of wheat diverted to feed.

Even so, farmers' resistance to feeding wheat will probably weaken if abundant wheat supplies and deficit feed grain output persist. (24)

USSR Plans Large-Scale Livestock Enterprises

The Soviet Union has announced plans to expand large-scale specialized production of livestock products during 1971-75.

To be put into operation are 1,170 specialized meat and dairy enterprises and 585 hatchery and broiler enterprises.

The 5-year plan calls for a doubling of integrated broiler production—which in 1970 accounted for 20 percent of the total output of poultry meat. Specialized egg output would increase from 25 percent of total production in 1970 to 40 percent in 1975.

Even if these changes do materialize, the bulk of the livestock output will continue to be provided by diversified farms.

A significant share of the USSR's livestock output still originates on small private holdings. In 1969 they produced about 36 percent of the meat (including poultry), 37 percent of the milk and 56 percent of the eggs. Most of the remainder came from unspecialized state and collective farms. (29)

Sky High Agriculture

Mongolia, known as the "Land of the Blue Sky," has been compared by some Americans to our State of Wyoming.

And there are many similarities in appearance, if not in size. Both Mongolia and Wyoming have their vast mountain regions, grasslands and plains, rivers and streams, but most of all livestock.

Livestock accounts for about 80 percent of Mongolia's agriculture. In 1970 the Mongolians had an estimated 13 million sheep, 4.4 million goats, 2.3 million horses, 2 million cattle and ½ million camels. Yaks make up a large portion of the general category of cattle.

Mongolians milk their lactating animals and convert the yield into such products as yogurt, cheese, and alcoholic drinks (especially *airaq* brewed from fermented mare's milk).

Because Mongolia has essentially a livestock economy, much of the cropland must be used for feed crops.

In 1970, 35 percent of cropland was utilized for the production of forage crops, mostly hay. Grain output came to 370,000 tons (from 440,000 hectares)—43,000 short of the goal but considerably higher than the 1969 yield.

Apparently more success was obtained in the production of vegetables and potatoes, both of which have received considerable attention over recent years in attaining the country's crop diversification goals.

Most of Mongolia's trade is with the USSR, and the Soviets provide much of the country's agricultural technology.

Mongolia's major farm exports are cattle, sheep, and goats and a variety of animal products and furs. Imports of foods are primarily cereals and sugar. (25)

Agribusinessman's World Getting Complicated

The ship that set sail in 1616 with America's first agricultural export—2,500 pounds of tobacco—created quite a wake on its voyage from Jamestown, Va., to England.

In that wake come the 1970/71 agricultural exports—which reached a record \$7.7 billion. In that wake, too, come the swelling complexities of international finance.

Today's agribusinessman concerned with exports must follow such matters as adjustments in exchange rates of foreign currency. The current surplus of dollars in a few countries abroad has led to some upward revaluations and may lead to others.

The recent revaluations of the Swiss franc and Austrian schilling, for instance, make U.S. products cheaper to import in terms of local currencies.

The situation in West Germany and the Netherlands is more complicated. These countries are letting the market value of their currencies float upward without changing the official par value. During the period for which the currencies are permitted to float, the prices of commodities receiving direct price support under the European Community's Common Agricultural Policy are being insulated from price declines resulting from currency appreciation. Both countries have introduced special import levies for their products to offset the difference between (a) the new and lower import prices and (b) the unchanged support prices, which are tied to the official par value.

However, certain commodities—including soybeans—do not receive price supports. U.S. exports of such items stand to increase as a result of the appreciated market value of the Dutch and Germany currency.

Since export prices are higher as a result of the upward float, export subsidies have been instituted also.

A surplus of dollars abroad has been of major concern in a number of developed countries since the late 1950's. With more dollars than

needed for commercial transactions, these countries increased their dollar reserves. These increases at first were welcomed. But in some cases reserves have grown too large and there is pressure on certain governments to revalue their currency (raise its value relative to the dollar). The result of a revaluation is that imports are cheaper and the volume of imports increases—using up the dollar reserves.

Developing nations, on the other hand, are likely to immediately spend their dollar earnings for imports rather than put them into reserves.

Despite the growing complexities of international trade, U.S. agricultural exports made a record contribution of \$6.4 billion to the balance of payments last year, up from \$3.6 billion in 1960. The net contribution—after deducting agricultural imports—went from a “negative” \$265 million in 1960 to a record “plus” of \$1.2 billion in 1966 and \$762 million in 1970. (26)

Cuba's 1970 Sugar Goal Strained the Economy

In 1963, Fidel Castro announced a 1970 goal for sugar production—10 million tons. In the target year, Cuba produced 8.5 million. Although short of the goal, it was nevertheless the highest output in Cuba's history.

Mobilization of the country's resources toward the goal of 10 million tons was a great strain on the economy. Priority given to transporting sugar cane caused transportation and distribution difficulties. As a result, consumption of many foodstuffs declined.

Cuba's goal for 1971 is for better balance among all sectors of the economy. A sugar target of 7 million tons was cited by Castro at the outset of the harvest. But this was later amended to 6.6 million in May, when it became apparent that 7 million tons was unattainable.

Unlike 1970, when thousands were recruited to cut cane, workers in the more important industries have remained at their jobs during the cur-

rent season. There are more cane harvesters available for the 1971 campaign than the previous year, but mechanization of the sugar industry is still insufficient for a country that ultimately hopes to diversify its agriculture. Sugar production in 1971 reached 9 million metric tons by the end of June. (28)

Greeks Switch Brands; Grow More Burley

U.S. tobacco growers face increased price competition from abroad and rising production costs at home in the 1970's. Many countries with labor cost advantages are rapidly expanding production of competing types of tobacco; Greece for example.

Traditionally growers of oriental tobacco, the Greeks are switching brands and growing more burley.

Greece remains the world's second largest producer of oriental tobacco (Turkey is first). But the production of Greek oriental has declined 30 percent since 1960. Burley production, meanwhile, has skyrocketed.

In 1960, Greece grew only 4,000 pounds of burley tobacco on 3 acres. By 1969 burley plantings had increased to 10,373 acres and production to 25 million pounds.

To attain the bigger production, the Greek National Tobacco Board worked closely with the growers. Besides providing preferential financial assistance, the Board placed strong emphasis on mechanization and irrigation. New growers were licensed and ceilings on allotments removed.

Burley production is expected to continue to mount. A 5-year plan announced in 1969 calls for production to reach 42 million pounds by 1974—a 67-percent increase from the 25 million pounds grown in '69.

All of Greece's burley is sold for export. Domestic manufacturers are prohibited by law from using local burley in their blends. The restriction prevents domestic buyers from competing with export buyers which would reduce the amount of burley for export and bid up the price. (27)

COMMERCIAL FREEZING OF SIX VEGETABLE CROPS IN THE SOUTH. John R. Brooker, and James L. Pearson, Marketing Economics Division, cooperating with Florida Agricultural Experiment Station. MRS 926.

Vegetable producers in the South might have a new outlet if food processing in the region were increased. This study of model vegetable freezing plants indicates such plants might be operated profitably at certain levels of plant size and prices.

FRUITS PART I: NONCITRUS BY STATES, 1969-70: PRODUCTION/USE/VALUE. Statistical Reporting Service. FRNT 4-1 (5-71).

This report presents statistics on production, farm disposition, price, and utilization of sales for 16 noncitrus fruits. Estimates of production and value for 1970 crops have been revised, where necessary, from preliminary estimates published in the Annual Crop Summary and Crop Values report released December 1970.

ECONOMIC IMPACT OF THE CROW WING CANOE TRAIL, WADENA COUNTY, MINN. Uel Blank, University of Minnesota; and Sterling H. Stipe Jr., National Resource Economics Division. ERS 467.

This study evaluates the economic impact of the development of a 70-mile long Canoe Trail in Wadena County, Minn., and provides useful guidelines for communities or organizations undertaking similar projects. (See March 1971 Farm Index.)

COSTS AND RETURNS: SOUTHWEST CATTLE RANCHES. Wylie D. Goodsell, and James R. Gray, Farm Production Economics Division; and Macie J. Belfield, New Mexico State University. FCR 78.

This study is part of a continuing nationwide report of costs and returns on commercial farms and ranches in selected farming regions. Returns in 1969 were above average because of favorable prices received

The publications listed here are issued by the Economic Research Service and cooperatively by the State universities and colleges. Unless otherwise noted, reports listed here and under Sources are published by ERS. Single copies are available free from The Farm Index, OMS, U.S. Department of Agriculture, Washington, D.C. 20250. State publications (descriptions below include name of experiment station or university after title) may be obtained only by writing to the issuing agencies of the respective States.

for cattle. Major expenses were feed, grazing fees, labor, and livestock purchases.

THE AGRICULTURAL SITUATION IN AFRICA AND WEST ASIA. Glenn R. Samson, Foreign Regional Analysis Division. ERS-For. 313.

This is one of five regional supplements to *The World Agricultural Situation: Review of 1970 and Outlook for 1971*, WAS 1, issued in November 1970. The report gives the early-season outlook for 1971 production and trade of selected commodities and countries and reviews country trade in farm products.

HIRED FARM LABOR: 1966 PATTERNS/FUTURE DEMAND PROSPECTS/PROPOSED FARM WAGE LEGISLATION. Verner N. Grise, Farm Production Economics Division. Stat.Bull. No. 462.

This report provides information on the hired farm work force and the wages it receives, by type and sales class of farm.

TAIWAN'S AGRICULTURAL GROWTH DURING THE 1970'S: SUPPLY, DEMAND, AND TRADE PROJECTIONS FOR SELECTED AGRICULTURAL PROJECTS. James F. Keefer and Amjad H. Gill, Foreign Regional Analysis Division. ERS-For. 316.

Rising incomes and rapid urbanization in Taiwan will greatly increase per capita consumption of most

foods and change consumption patterns in favor of higher protein diets.

RURAL POOR WHO COULD BENEFIT FROM JOB RETRAINING IN THE EAST NORTH CENTRAL STATES. Marvin E. Konyha, Florida Extension Service. Economic Development Division cooperating with Office of Economic Opportunity. AER 204.

Well over half of low-income, open-country residents surveyed in the East North Central States—said they were not interested in a free local training course. A substantial number would benefit from retraining, but innovative programs are needed.

LAND USE CLASSIFICATION WITH SIMULATED SATELLITE PHOTOGRAPHY. Donald J. Belcher, Ernest H. Hardy, and Elmer S. Phillips, Cornell University, cooperating with Natural Resource Economics Division. AIB 352.

Earth orbiting satellites could provide much of the data required for USDA's periodic land use studies. This report is based on imagery simulated from black and white aerial photographs.

MAJOR STATISTICAL SERIES OF THE U.S. DEPARTMENT OF AGRICULTURE: HOW THEY ARE USED (VOLUME 6. LAND VALUES AND FARM FINANCE). Carson D. Evans and Lawrence A. Jones, Farm Production Economics Division. Agricultural Handbook No. 365.

This handbook is one of several that update *Agricultural Handbook No. 118, Major Statistical Series of the U.S. Department of Agriculture*, published in 10 volumes during 1957-60.

AGRICULTURE AND TRADE OF THE CARIBBEAN AREA. Wilbur F. Buck, Economic Research Service. ERS-For. 309.

This study examines some of the factors affecting the Caribbean re-

gion's recent past and short-term future. Special attention is given to the extent and direction of Caribbean trade and its relationship to U.S. agriculture and industry. (See May 1971 Farm Index.)

DICTIONARY OF INTERNATIONAL AGRICULTURAL TRADE. Harry W. Henderson, Foreign Agricultural Service. Agriculture Handbook No. 411.

In 170 pages, this lexicon defines hundreds of words and technical terms used in international trade of farm commodities.

FERTILIZER USE AND WATER QUALITY. G. Stanford, A. W. Taylor, and C. B. England, Agricultural Research Service. ARS 41-168.

This publication evaluates the role of nitrogen and phosphorus fertilizers in water pollution and summarizes the research on the relations between nutrient inputs and outputs.

STORING AND HANDLING COTTON IN PUBLIC FACILITIES: AN EVALUATION OF COST STRUCTURES IN 1964/65 AND 1969/70. Joseph L. Ghetti, Whitman M. Chandler, Jr., Roger P. Strickland, Jr., and Rodney C. Kite,

Marketing Economics Division.

Declining volumes of cotton available for storage and handling and continuing rising costs have exerted a major impact on the industry.

THE AGRICULTURAL SITUATION IN COMMUNIST AREAS: REVIEW OF 1970 AND OUTLOOK FOR 1971. Donald Chrisler and others, Foreign Regional Analysis Division. ERS-For. 314.

This study reviews developments in the Soviet Union, Eastern Europe, and Mainland China, and includes highlights for North Vietnam, Mongolia, and Cuba.

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Economic Trends

ITEM	UNIT OR BASE PERIOD	1967	1970 YEAR	1970 May	Mar.	1971 Apr.	May
Prices:							
Prices received by farmers	1967 = 100	—	110	110	111	111	113
Crops	1967 = 100	—	100	100	107	108	111
Livestock and products	1967 = 100	—	118	117	114	114	114
Prices paid, interest, taxes and wage rates	1967 = 100	—	114	114	118	119	120
Family living items	1967 = 100	—	114	113	117	117	118
Production items	1967 = 100	—	110	109	114	115	115
Ratio ¹	1967 = 100	—	96	96	94	93	94
Wholesale prices, all commodities	1967 = 100	—	110.4	110.1	113.0	113.3	113.8
Industrial commodities	1967 = 100	—	110.0	108.7	112.8	113.3	113.7
Farm products	1967 = 100	—	111.0	111.3	113.0	113.0	114.0
Processed foods and feeds	1967 = 100	—	112.0	111.1	113.7	113.5	114.5
Consumer price index, all items	1967 = 100	—	116.3	115.7	119.8	120.2	120.8
Food	1967 = 100	—	114.9	114.9	117.0	117.8	118.2
Farm Food Market Basket: ²							
Retail cost	Dollars	1,080	1,225	1,226	1,228	1,239	1,243
Farm value	Dollars	414	480	485	476	476	474
Farm-retail spread	Dollars	666	745	741	752	763	769
Farmers' share of retail cost	Percent	38	39	40	39	38	38
Farm Income: ³							
Volume of farm marketings	1967	100	103	80	84	77	80
Cash receipts from farm marketings	Million dollars	42,693	48,678	3,346	3,519	3,358	3,400
Crops	Million dollars	18,434	19,589	947	1,049	934	1,000
Livestock and products	Million dollars	24,259	29,089	2,299	2,470	2,324	2,400
Realized gross income ⁴	Billion dollars	49.0	56.2	—	56.1	—	—
Farm production expenses ⁴	Billion dollars	34.8	40.4	—	41.5	—	—
Realized net income ⁴	Billion dollars	14.2	15.8	—	14.6	—	—
Agricultural Trade:							
Agricultural exports	Million dollars	—	7,174	573	716	634	625
Agricultural imports	Million dollars	—	5,667	443	500	554	478
Land Values:							
Average value per acre	1967 = 100	—	⁶ 118	⁷ 117	—	—	⁸ 121
Total value of farm real estate	Billion dollars	—	⁶ 207.3	⁷ 208.2	—	—	⁸ 214.0
Gross National Product: ⁴							
	Billion dollars	793.9	976.5	—	1,020.7	—	—
Consumption	Billion dollars	492.1	616.7	—	646.4	—	—
Investment	Billion dollars	116.6	135.7	—	142.4	—	—
Government expenditures	Billion dollars	180.1	220.5	—	228.7	—	—
Net exports	Billion dollars	5.2	3.6	—	3.3	—	—
Income and Spending: ⁵							
Personal income, annual rate	Billion dollars	629.3	801.0	799.7	836.8	841.4	847.4
Total retail sales, monthly rate	Million dollars	26,151	30,381	30,502	32,266	32,604	—
Retail sales of food group, monthly rate	Million dollars	5,759	6,789	6,765	7,001	7,077	—
Employment and Wages: ⁵							
Total civilian employment	Millions	74.4	78.6	78.6	78.5	78.7	79.0
Agricultural	Millions	3.8	3.5	3.6	3.4	3.6	3.5
Rate of unemployment	Percent	3.8	4.9	4.9	6.0	6.1	6.2
Workweek in manufacturing	Hours	40.6	39.8	39.8	39.7	39.4	39.9
Hourly earnings in manufacturing, unadjusted	Dollars	2.83	3.36	3.34	3.52	3.53	3.55
Industrial Production: ⁵							
	1967 = 100	—	106	107	105	105	106
Manufacturers' Shipments and Inventories: ⁵							
Total shipments, monthly rate	Million dollars	45,712	55,554	55,661	58,578	58,463	—
Total inventories, book value end of month	Million dollars	82,825	99,614	97,635	99,416	99,542	—
Total new orders, monthly rate	Million dollars	45,928	55,009	55,139	58,326	57,244	—

¹ Ratio of index of prices received by farmers to index of prices paid, interest, taxes, and farm wage rates. ² Average annual quantities of farm food products purchased by urban wage-earner and clerical-worker households (including those of single workers living alone) in 1959-61—estimated monthly. ³ Annual and quarterly data are on 50-State basis. ⁴ Annual rates seasonally adjusted first quarter. ⁵ Seasonally adjusted. ⁶ As of November 1, 1970. ⁷ As of March 1, 1970. ⁸ As of March 1, 1971.

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